(b) REMARKS

The claims are 24 and 26 with claim 24 being independent. Reconsideration of the claims is requested in view of the arguments presented hereafter.

Claims 24 and 26 were rejected as obvious over Suzuki '101 in view of Borsenberger "Organic Photoreceptors" and further in view of JP '265, Kawamorita '214 or Kovacs '313. The rejection is respectfully traversed.

The Examiner has argued that although Suzuki teaches triarylamines, stilbene and hydrazone charge transport compounds are alternatives for each other, the recent submission by Applicants showing different transmission characteristics suggests that the compounds are not equivalents for all exposure wavelengths. The Examiner also notes it is not the charge transport compounds that have the claimed transmittance, but that the charge transport layer containing a charge transport material and a binder resin, together, have the transmittance values.

The Examiner further argues that the transmittance of the entire charge transport layer (charge transport compound and binder)is tested in the specification on page 43, while the last submission allegedly provides only the transmittance of the Suzuki charge transport compound. As such, the Examiner argues the evidence does not provide a direct comparison of the same materials and does not provide a determination of Suzuki's charge transport layer transmittance. Finally, the Examiner notes the evidence must be in the form of a Rule 132 Declaration.

Prior to addressing the grounds of rejection, Applicants wish to again briefly review certain key features and advantages of the present claimed invention. The Examiner's concerns will next be addressed.

The present invention relates to an electrophotographic apparatus having a semiconductor laser of oscillation wavelength of 380 to 500 nm, hereinafter called "a short-wavelength semiconductor laser", as an exposure light source.

The present inventors have found that a conventional electrophotographic photosensitive member whose sensitivity is optimized to the short-wavelength semiconductor laser, sometimes shows a large fluctuation in its potential when it is used repeatedly, and provides a defective electrophotographic image. The inventors determined that this problem is caused by excessive residual charges remaining in the photoconductive layer. In order to minimize this undesirable charge accumulation, the present inventors conducted experiments regarding various combinations of charge generating materials and charge transporting materials. The inventors determined that a combination of azo pigments as the charge generating material and the triarylamines represented by the formula (1) in claim 24 are unexpectedly efficient in reducing such undesired charge accumulation by short wavelength semiconductor lasers.

The superiority of the azo pigment and instant triarylamine combination in a photosensitive member is shown in Table 1 on page 45 and in Table 2 on page 47 of the present specification. Namely, in Example 1 to Example 5, electrophotographic photosensitive members in which the above-mentioned combination is used, are employed. Each of the resulting electrophotographic photosensitive members shows superior stability

after repeated use, i.e., Δ Vd and Δ V1 are small. In Examples 1-5 the durability is excellent even though transmittance is 100%.

On the other hand, for the electrophotographic photosensitive member in Comparative Example 3, in which the charge transport material of Example 5 is replaced with that of Comparative Compound 1, shown on page 44 of the present specification, the transmittance of the charge transfer material is a mere 20% and the durability is poor. The superiority of the claimed combination of the present invention is, therefore, supported by such comparative experimental results.

With regard to the Examiner's stated concerns, the graph presented in the last Response was not the transmittance of the charge transporting compound of Suzuki's Example 1, but, instead, was the transmittance of a charge transport layer comprising the charge transporting compound of Suzuki Example 1 and a binder and the layer being prepared according to Example 1 of the present specification. Thus, the charge transport layer actually tested included 8 parts of a charge transporting compound (a) of Suzuki Example 1, 10 parts of bisphenol-Z polycarbonate binder and had a thickness of 23 μm. The charge transport layer of Suzuki Example 1 comprises 8 parts of a charge transporting compound (a), 10 parts of a bisphenol-Z type polycarbonate binder and had a thickness of 20 μm. See paragraphs ([0117]-[0119]). Therefore, the graphed data is for a charge transport layer which is substantially identical to that of Suzuki Example 1. A Rule 132 Declaration including this comparative test data will be filed shortly to complete the record.

The stilbene derivative of Suzuki '101 as shown in paragraph [0118] exhibits layer transmittance values at 380 nm and 445 nm which are less than 90%. The

transmittance of a layer with the Suzuki stilbene derivative at 380 nm is 0% and the transmittance at 445 nm is about 75%. Therefore, the transmittance of the photosensitive member of Suzuki Example 1 at an oscillation wavelength between 380 to 450 nm is below 90%. Further, the transmittance of the present Comparative Example 1 hydrazone is 0% at 380 nm and about 20% at 445 nm, which is comparable to the Suzuki compound results. Clearly, both comparative compounds are significantly inferior to the 100% transmittance of layers containing the instant compounds.

Accordingly, the data at 380 nm and 445 nm is reasonably commensurate with the present claimed range of 380 nm to 450 nm and the lower limit of transmittance of at least 90% is reasonably commensurate with 100%. The trend is clear that layers containing the present compounds are superior to the closest art.

Borsenberger broadly relates to organic photoreceptors for imaging system and discloses tri-p-tolylamine and triphenylamine as donor compounds. However, Borsenberger is devoid of any disclosure about the technical problem which the present inventors have found regarding the electrophotographic apparatus in which a short wavelength semiconductor laser is employed. Borsenberger also fails to teach that tri-p-tolylamine and triphenylamine provides better results compared with other triarylamines, when used with azo pigments as a charge generating material in an electrophotographic apparatus using a short wavelength semiconductor laser. Accordingly, there is no motivation to arbitrarily combine the Borsenberger triarylamines with Suzuki. There are countless thousands of triarylamine compounds in existence. Without hindsight, one of ordinary skill would not understand there is any special advantage in selecting a

Borsenberger compound for use in Suzuki. Moreover, Suzuki uses triarylamines which are different in kind than those disclosed in Borsenberger.

Furthermore, JP '265, Kawamorita and Kovacs merely disclose the sensitivity of the photoconductive layer to a short-wavelength semiconductor laser and are silent about the technical advantages of the present invention.

Thus, the teaching of the respective cited references fail to provide a sufficient basis for a reasonable expectation of success and therefore, the present invention is not obvious from the cited references. Moreover, unexpectedly superior results are obtained herein which rebut any possible presumption of obviousness.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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